

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/10564

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/47 C07K19/00 C12N15/12 C12N15/62 C12N15/63
C12N5/00 A01K67/027 C07K16/18 G01N33/68 G01N33/53
C12Q1/68 A61K38/17 A61K39/00 A61K48/00 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K C12N A01K G01N C12Q A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EP0-Internal, Sequence Search, BIOSIS, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/75067 A (HYSEQ INC ;LIU CHENGHUA (US); TANG Y TOM (US); DRMANAC RODOJE T (U) 11 October 2001 (2001-10-11) the entire document, particularly SEQ ID NOS:77 and 30445, pages 1-6,24-37,45,53,55-62,74-84,87-94 and the claims & DATABASE EBI [Online] Human diagnostic protein #77 13 February 2002 (2002-02-13), DRMANAC RT ET AL.: "New isolated polynucleotide and encoded polypeptides, useful in diagnostics,forensics, gene mapping, identifications of mutations responsible for genetic disorders or other traits and to assess biodiversity" Database accession no. ABG00086 abstract -/--	1-65

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

2 February 2004

Date of mailing of the international search report

09 JUL 2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Schmidt, Harald

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 03/10564

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	<p>& DATABASE EBI [Online] DNA encoding novel human diagnostic protein #77 13 February 2002 (2002-02-13), DRMANAC RT ET AL.: "New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identifications of mutations responsible for genetic disorders or other traits and to assess biodiversity" Database accession no. AAS64273 abstract</p>	
A	<p>----- US 6 410 724 B1 (DEJEAN ANNE ET AL) 25 June 2002 (2002-06-25) the whole document</p>	
A	<p>----- XU X-R ET AL: "Insight into hepatocellular carcinogenesis at transcriptome level by comparing gene expression profiles of hepatocellular carcinoma with those of corresponding noncancerous liver" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 98, no. 26, 18 December 2001 (2001-12-18), pages 15089-15094, XP002231180 ISSN: 0027-8424 the whole document</p>	
A	<p>----- WO 02/059611 A (TULARIK INC) 1 August 2002 (2002-08-01) the whole document</p> <p>-----</p>	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/10564

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☒ Claims Nos.: 1-65 (all partially)
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-5, 8, 11-18 completely and 6, 7, 9, 10, 19-65 partially

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Although claims 24 to 26 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Although claims 27 to 33 and 60 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box I.2

Claims Nos.: 1-65 (all partially)

The scope of claims 1 to 65, in as far as the expressions "functional variant", "variant", "non-functional mutant variant" or "fragment" are concerned, is so unclear within the meaning of Article 6 PCT that a meaningful International Search is impossible with regard to these expressions.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5,8,11-18 (completely) and 6,7,9,10,19-65 (partially)

polypeptide and fusion proteins comprising a sequence according to SEQ ID NO:2, nucleic acids encoding said polypeptide, their vectors, cells, transgenic non-human mammals, antibodies, diagnostics, compositions and their methods

1.1. claims: 1,2 (completely) and 19,22-27,31-33,47-60 (all partially)

polypeptide and fusion proteins comprising a sequence according to SEQ ID NO:2 and its methods for diagnosis, prevention and treatment

1.2. claims: 61-65 (partially)

method of identifying a pharmacologically active compound wherein a polypeptide according to SEQ ID NO:2 is provided

1.3. claims: 3-5 (completely) and 6-11,13-46,60 (partially)

nucleic acid encoding a polypeptide comprising SEQ ID NO:2, vectors, cells and transgenic non-human mammal, and its use in the diagnosis, prevention and treatment of a liver disorder or a epithelial cancer

1.4. claims: 12 (completely) and 19,22-27,31,32 (partially)

antibodies against a polypeptide comprising SEQ ID NO:2 and their use in a method for prevention, treatment and diagnosis

2. claims: 6,7,9,10,19-65 (all partially)

vectors comprising a nucleic acid encoding a polypeptide according to SEQ ID NO:1, their cells, transgenic non-human mammals, diagnostics, compositions and methods comprising polypeptides according to SEQ ID NO:1, their antibodies, nucleic acids, vectors and cells

3. claims: 6,7,9,10,19-65 (all partially)

vectors comprising a nucleic acid encoding a polypeptide according to SEQ ID NO:3, their cells, transgenic non-human mammals, diagnostics, compositions and methods comprising polypeptides according to SEQ ID NO:3, their antibodies, nucleic acids, vectors and cells

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

4. claims: 6,7,9,10,19-65 (all partially)

vectors comprising a nucleic acid encoding a polypeptide according to SEQ ID NO:4, their cells, transgenic non-human mammals, diagnostics, compositions and methods comprising polypeptides according to SEQ ID NO:4, their antibodies, nucleic acids, vectors and cells

5. claims: 6,7,9,10,19-65 (all partially)

vectors comprising a nucleic acid encoding a polypeptide according to SEQ ID NO:5, their cells, transgenic non-human mammals, diagnostics, compositions and methods comprising polypeptides according to SEQ ID NO:5, their antibodies, nucleic acids, vectors and cells

6. claims: 6,7,9,10,19-65 (all partially)

vectors comprising a nucleic acid encoding a polypeptide according to SEQ ID NO:6, their cells, transgenic non-human mammals, diagnostics, compositions and methods comprising polypeptides according to SEQ ID NO:6, their antibodies, nucleic acids, vectors and cells

7. claims: 6,7,9,10,19-65 (all partially)

vectors comprising a nucleic acid encoding a polypeptide according to SEQ ID NO:7, their cells, transgenic non-human mammals, diagnostics, compositions and methods comprising polypeptides according to SEQ ID NO:7, their antibodies, nucleic acids, vectors and cells

8. claims: 6,7,9,10,19-65 (all partially)

vectors comprising a nucleic acid encoding a polypeptide according to SEQ ID NO:8, their cells, transgenic non-human mammals, diagnostics, compositions and methods comprising polypeptides according to SEQ ID NO:8, their antibodies, nucleic acids, vectors and cells

9. claims: 6,7,9,10,19-65 (all partially)

vectors comprising a nucleic acid encoding a polypeptide according to SEQ ID NO:9, their cells, transgenic non-human mammals, diagnostics, compositions and methods comprising polypeptides according to SEQ ID NO:9, their antibodies, nucleic acids, vectors and cells

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

10. claims: 6,7,9,10,19-65 (all partially)

vectors comprising a nucleic acid encoding a polypeptide according to SEQ ID NO:47, their cells, transgenic non-human mammals, diagnostics, compositions and methods comprising polypeptides according to SEQ ID NO:47, their antibodies, nucleic acids, vectors and cells

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/10564

Patent document cited in search report		Publication date	Patent family member(s)	Publication date			
WO 0175067	A	11-10-2001	AU 3486501 A	14-08-2001			
			AU 3995501 A	12-09-2001			
			AU 4925101 A	15-10-2001			
			AU 4972801 A	15-10-2001			
			AU 5119401 A	15-10-2001			
			AU 5521401 A	15-10-2001			
			CA 2399681 A1	09-08-2001			
			CA 2404501 A1	11-10-2001			
			CA 2404555 A1	11-10-2001			
			EP 1254266 A1	06-11-2002			
			EP 1268762 A1	02-01-2003			
			EP 1268510 A2	02-01-2003			
			JP 2004502403 T	29-01-2004			
			JP 2004500120 T	08-01-2004			
			WO 0157266 A1	09-08-2001			
			WO 0164839 A2	07-09-2001			
			WO 0175067 A2	11-10-2001			
			WO 0175064 A2	11-10-2001			
			WO 0174836 A1	11-10-2001			
			WO 0175093 A1	11-10-2001			
			US 2004048249 A1	11-03-2004			
			US 2003092112 A1	15-05-2003			
			US 2003087370 A1	08-05-2003			
			US 2003096279 A1	22-05-2003			
			US 6436703 B1	20-08-2002			
			US 2002061567 A1	23-05-2002			
			US 2003180722 A1	25-09-2003			
			US 2002146757 A1	10-10-2002			
			US 6410724	B1	25-06-2002	US 2002042073 A1	11-04-2002
						AU 6416198 A	30-10-1998
						CA 2286282 A1	15-10-1998
EP 0973941 A1	26-01-2000						
JP 2001518788 T	16-10-2001						
WO 9845478 A2	15-10-1998						
US 6265161 B1	24-07-2001						
US 2004076950 A1	22-04-2004						
WO 02059611	A	01-08-2002	WO 02059611 A2	01-08-2002			
			US 2002150934 A1	17-10-2002			

BEST AVAILABLE COPY